Western Municipal Water District

Western Riverside County

Regional Wastewater Treatment Plant

BIOSOLIDS MONITORING REPORT

CALENDAR YEAR 2001

Order No. 97-2

NPDES No. CA8000316

January 14, 2002

I Certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

BILL BEAM
Plant Manager

BB/al

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WESTERN RIVERSIDE COUNTY
REGIONAL WASTEWATER TREATMENT PLANT

BIOSOLIDS REPORT 2001

Process Description

The Western Riverside County Regional Wastewater Treatment Plant (WRCRWTP) utilizes a 4.41-MG oxidation ditch for initial secondary treatment. From the oxidation ditch, the sludge is allowed to settle in secondary clarifiers. The continuously wasted sludge is then thickened and fed to two aerobic digesters for further sludge stabilization. The digesters were primarily operated in series mode during 2001. The primary digester receives the thickened sludge while the secondary digester receives transferred sludge from the primary digester daily to maintain an overall system mass balance.

The oxidation ditch was maintained at an SRT of between 12 to 20 days through out this reporting period and at a temperature of at least 20° C, while the digesters have been maintained at an SRT greater than 45 days at temperatures exceeding 30°C. A total of 725.47 dry metric tons of biosolids on a dry weight basis were produced during the calendar year of 2001. A total of 560.40 dry metric tons of biosolids were produced during the calendar year of 2000. All biosolids were either land applied or composted by Synagro at their composting facility.

Class B Biosolids Reduction Requirements

Vector reduction requirements were met by either maintaining a volatile solids reduction of at least 38% in the digesters or by maintaining a SOUR of less than or equal to 1.5 mg/g/hour on a dry weight basis. Supporting data for all reductions can be found in the following tables.

The 2001 Biosolids Land Application Annual Report and Land Application Monthly Reports prepared by Synagro West, Inc. can be found in Appendix A of this report along with all supporting laboratory results. This report includes:

- Biosolids Site Summary
- Site Specific Information
- Biosolids Analyses Summary

Appendix B contains the Synagro Biosolids Composting Annual Report that includes:

- The mass of biosolids received at the Regional Composting Facility (RCF) on a monthly basis.
- Monthly certification that the compost produced meets US EPA class A criteria
- Input/output of materials at the RCF for 2001.

WESTERN RIVERSIDE COUNTY REGIONAL WASTEWATER TREATMENT PLANT

CLASS B BIOSOLIDS REDUCTION 2001

JANUARY 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
39	NA	45	NA

FEBRUARY 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
39	0.6	47	NA

MARCH 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
NA	0.8	40	NA

APRIL 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
42	0.9	66	NA

MAY 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
48	0.9	74	NA

JUNE 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
49	1.4	69	NA

JULY 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
48	2.7	66	163

AUGUST 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
49	1.1	50	459

SEPTEMBER 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
49	1.3	53	417

OCTOBER 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
53	0.71	119	393

NOVEMBER 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
43	1.4	185	2,820

DECEMBER 2001 AVERAGE			
Vector Attraction		Pathogen Reduction	
% Vol Reduction	SOUR's	Combined SRT Days	Fecal Coliform Geometric Mean
48	1.04	71	2,715

Note: Only one parameter needs to be met for vector attraction and pathogen reduction.
Vector attraction limits: 38% volatile solids reduction or SOUR's equal to or less than 1.5
Pathogen reduction limits: Previous data indicates that fecal coliform reductions can be met at a digester temperature of 30°C with a combined SRT of less than 34 days or a fecal coliform geometric mean of less than 2 million MPN.

QUARTERLY ANALYSIS DIGESTER RESULTS

1st Quarter Analysis March 2001			*2nd Quarter Analysis June 2001*			*3rd Quarter Analysis September 2001*			*4th Quarter Analysis December 2001*		
Constitent	Pollutant Concentration Limits for EQ and PC Biosolids mg/kg	Results mg/kg	Constitent	Pollutant Concentration Limits for EQ and PC Biosolids mg/kg	Results mg/kg	Constitent	Pollutant Concentration Limits for EQ and PC Biosolids mg/kg	Results mg/kg	Constitent	Pollutant Concentration Limits for EQ and PC Biosolids mg/kg	Results mg/kg
Arsenic	41	ND	Arsenic	41	5	Arsenic	41	ND	Arsenic	41	ND
Cadmium	39	2	Cadmium	39	2	Cadmium	39	3	Cadmium	39	2
Chromium	1,200	28	Chromium	1,200	26	Chromium	1,200	37	Chromium	1,200	33
Copper	1,500	690	Copper	1,500	410	Copper	1,500	540	Copper	1,500	460
Lead	300	400	Lead	300	28	Lead	300	40	Lead	300	28
Mercury	17	ND	Mercury	17	ND	Mercury	17	ND	Mercury	17	ND
Molybdenum	75	11	Molybdenum	75	7	Molybdenum	75	6	Molybdenum	75	14
Nickel	420	24	Nickel	420	21	Nickel	420	30	Nickel	420	22
Selenium	36	7	Selenium	36	6	Selenium	36	7	Selenium	36	8
Zinc	2,800	680	Zinc	2,800	530	Zinc	2,800	810	Zinc	2,800	810
NH_3	NA	910	NH_3	NA	1600	NH_3	NA	1500	NH_3	NA	420
NO_2	NA	410	NO_2	NA	ND	NO_2	NA	ND	NO_2	NA	5
NO_3	NA	ND	NO_3	NA	ND	NO_3	NA	ND	NO_3	NA	ND

WESTERN RIVERSIDE COUNTY REGIONAL WASTEWATER TREATMENT PLANT

BIOSOLIDS PRODUCED 2001

JANUARY

	DRY TONS	WET TONS
LAND APPLIED	41.6	235.27
COMPOSTED	10.0	56.55

FEBRUARY

	DRY TONS	WET TONS
LAND APPLIED	39.0	192.37
COMPOSTED	26.7	150.71

MARCH

	DRY TONS	WET TONS
LAND APPLIED	53.7	179.38
COMPOSTED	6.8	38.6

APRIL

	DRY TONS	WET TONS
LAND APPLIED	32.7	170.42
COMPOSTED	0	0

MAY

	DRY TONS	WET TONS
LAND APPLIED	59.2	196.52
COMPOSTED	7.6	25.19

JUNE

	DRY TONS	WET TONS
LAND APPLIED	18.5	61.36
COMPOSTED	41.5	137.81

JULY

	DRY TONS	WET TONS
LAND APPLIED		
COMPOSTED	71.5	237.39

AUGUST

	DRY TONS	WET TONS
LAND APPLIED	28.3	94.00
COMPOSTED	75.6	250.72

SEPTEMBER

	DRY TONS	WET TONS
LAND APPLIED	18.6	103.46
COMPOSTED	36.3	120.28

OCTOBER

	DRY TONS	WET TONS
LAND APPLIED	30.6	169.59
COMPOSTED	34.3	124.69

NOVEMBER

	DRY TONS	WET TONS
LAND APPLIED	23.3	84.59
COMPOSTED	54.3	197.66

DECEMBER

	DRY TONS	WET TONS
LAND APPLIED		
COMPOSTED	89.6	326.13

Total wet tons Produced for 2001	3152.69
TOTAL DRY TONS LAND APPLIED FOR 2001	345.46
TOTAL DRY TONS COMPOSTED FOR 2001	454.22
TOTAL BIOSOLIDS PRODUCED DRY TONS FOR 2001	799.68
TOTAL BIOSOLIDS PRODUCED DRY METRIC TONS FOR 2001	725.47
TOTAL BIOSOLIDS PRODUCED DRY METRIC TONS FOR 2000	560.40
TOTAL BIOSOLIDS PRODUCED DRY METRIC TONS FOR 1999	1033.9
TOTAL BIOSOLIDS PRODUCED DRY METRIC TONS FOR 1998	115.2

313.33 LA DMT
411.97 COMP DMT

SYNAGRO

A Residuals Management Company

Biosolids Land Application Annual Report

for

Western Riverside RWA

2001

WESTERN RIVERSIDE CO. RWA, CA CAKE

MONTH/YEAR	AMOUNT	UNIT	DRY TONS	UNIT	DRY METRIC TONS
January 2001	235.27	W	41.64	D	37.77
February 2001	192.37	W	38.96	D	35.33
March 2001	179.38	W	53.65	D	48.66
April 2001	170.41	W	32.70	D	29.66
May 2001	196.52	W	59.23	D	53.72
June 2001	61.36	W	18.49	D	16.77
August 2001	94.00	W	28.33	D	25.70
September 2001	103.46	W	18.64	D	16.91
October 2001	169.59	W	30.56	D	27.72
November 2001	84.59	W	23.25	D	21.08
YEARLY TOTAL:	1,486.95	W	345.46	D	313.33

ANNUAL RESIDUAL SAMPLING SUMMARY FORM

Facility Name: WESTERN RIVERSIDE CO. RWA, CA
NPDES#:
WWTP Name: WESTERN RIVERSIDE COUNTY RWA

Laboratory
1) A & L EASTERN AGRICULTURAL LABS

Residual Analysis Data

Product Type	CAK	CAK	CAK	CAK	CAK	CAK	CAK
Lab Usage From	01/01/01	02/01/01	03/01/01	04/01/01	05/01/01	09/01/01	11/01/01
Through	01/31/01	02/28/01	03/31/01	04/30/01	08/31/01	10/31/01	11/30/01
Percent Solids	17.7	20.25	29.91	19.19	30.14	18.02	27.48
PARAMETERS (mg/kg dry weight)							
Arsenic	4.46	5.18	2.71	2.15	3.92	4.69	0.38
Cadmium	2.8	2.6	4.1	2.4	6.5	3.4	3.1
Chromium	35	26	58	42	48	53	39
Copper	695	502	404	545	791	546	487
Lead	36	29	33	31	80	23	28
Mercury	1.68	2.23	1.98	1.95	3.7	2.21	1.63
Molybdenum	14	11	9	10	27	10	7
Nickel	29	24	49	31	21	32	34
Selenium	4.85	4.77	10.97	7.45	8.29	8.57	3.2
Zinc	766	635	580	672	923	735	707
TKN	64,900	67,300	36,800	52,800	37,000	48,900	40,700
Ammonia-Nitrogen	11,500	11,700	7,500	4,800	4,700	8,100	9,400
Nitrate-Nitrogen	<10	10	11	11	177	91	<10
Total Phosphorus	44,200	33,800	0	0	0	0	0